DOCUMENT RESUME

ED 235 883 PS 013 846

AUTHOR Tyler, Ralph W.
TITLE If Not I.Q. - What?
PUB DATE 18 Sep 80
NOTE 24p.
PUB TYPE Information Analyses (070) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Achievement Tests; Elementary Secondary Education; *Intelligence Tests; Occupational Tests; Psychological Testing; *Standardized Tests; *Test Bias

ABSTRACT

The use of psychological and educational tests in World War I led to their adoption in schools for testing intelligence and achievement in order to classify students academically according to a national norm. After World War II, rapid changes in occupational and social structure demanded the education and identification of students for employment. As educational conditions changed, it became evident that several untenable assumptions had been made regarding standardized tests (for example, the assumption of difference between measured intelligence and achievement, and the assumption of the normal distribution of tested behaviors in the population). Civil rights movements sought out bias and discriminatory practices regarding intelligence and aptitude tests. This process led the Supreme Court of California to ban the use of intelligence tests in their public schools. In the past, the results of intelligence tests have been used for four major purposes: (1) to predict the educational, occupational, and social potential of the individual; (2) to help the child and the parents plan for the child's education and career in terms of "realistic" goals; (3) to assign the child to a particular educational or training program or track; and (4) to indicate the appropriate environment in which a child with a low I.Q. should be placed. These tests no longer serve to provide information that can help in planning for the continuous development of human beings. Useful data can be obtained, however, and time and effort involved in collecting comprehension information may be reduced as experience and experiments reveal more economical means of assessment. (BJD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Ralph W. Tyler
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED235883

PS 013846

IF NOT I.Q. - WHAT?

Ralph W. Tyler

Director Emeritus, Center for Advanced Study in the Behavioral Sciences

September 18, 1980

The Development of Standardized Tests

The successful use of psychological and educational tests in World War I led to their wide adoption by schools and other civilian institutions. When America drafted two million men for military service in 1917, the problem of organizing and training this large number of persons who had had no previous military experience was overwhelming. Who was to be selected for officer training and who for the variety of technical tasks: construction batallions, signal corps, quartermaster corps, and the like? The psychological advisers developed the Army Alpha Test and other classification tests that provided the basis for selecting and classifying this large assortment of young men. After the War, group tests, both of intelligence and achievement, were constructed and developed for school use employing the same methodology that was formulated for the Army Alpha and other military classification tests.

This methodology is designed to arrange those who take the test on a continuum from those who make the highest score to those who make the lowest. Such an arrangement permits one to identify the position of any individual in terms of his or her standing on the total group. For example, Mary Moor is at the ninety-eighth percentile and Richard Roe is in the bottom quarter of the group. Furthermore, the arrange-

ment enables one to idenfity those who compose any desired fraction of the group, for example, the persons in the top quarter or those in the lowest third.

By administering the tests to a representative sample of a defined population, such as children in the third grade of U.S. schools, the continuum on which these test scores are arranged is the distribution of all American third graders. This makes it possible to overcome the limitations in comparisons within an individual classroom, school, city or state by referring to a national norm.

Changes in Education

This briefly describes the conception of educational and psychological appraisal that prevailed until recently. The purpose was to sort students from excellent to poor. Intelligence tests, like those of educational achievement, were also developed to sort children rather than to aid teachers and others to help children learn. Schools, colleges and special educational institutions were conceived to be static and relatively unchangeable so that the problem was to identify children and youth who would fit into these institutions with their static programs and procedures. Furthermore, this sorting procedure seemed necessary in an earlier period. In the United States, as long as most jobs were unskilled and professional and managerial positions comprised a very small sector of the labor force, only a few persons needed to complete secondary school in order to gain employment and contribute to the economic system. In the political and social spheres, the same pyramid prevailed: not more than 5 or 10 percent were expected to be well

educated, with the vast majority of the population made up of the "silent electorate." Although this situation had been changing gradually for more than a century, it was only after World War II that rapid changes in the occupational and social structure created sharp new demands for education. For example, in 1800 about 60 percent of the U.S. labor force was engaged in agriculture, whereas in 1900, 38 percent was employed in agriculture--a shift of 22 percent in 100 years. In 1980, agricultural labor is down to less than 5 percent--a shift of 33 percent in 80 years. In 1800 the unskilled in all categories comprised more than 80 percent of the labor force, in 1900 they made up 60 percent and in 1980 about 6 percent. The rapid development of employment in the various services--education, health, recreation, social services, administration, and accounting has largely taken place since 1948. Now, jobs requiring no schooling are few in number while tasks requiring at least a high school education make up nearly two-thirds of employment opportunities. Schools are now expected to educate all or nearly all children rather than to sort them, using test scores and grades to encourage a fraction of the children to go on with their education and to discourage a large fraction on the basis of their lower test scores and their lack of marked success in the early years.

Critical Appraisal of Tests and Their Uses

As educational conditions changed, standardized tests began to be viewed from different perspectives. It has become clear that in the development of intelligence tests certain assumptions were made that are now recognized as untenable. It was assumed that a child's

success in school was a dependable indication of intelligence, hence questions or problems that correlated with the child's progress in school and the grades teachers gave him or her were valid indicators of the child's intelligence. It was assumed that questions or problems the answers to which are not specifically taught in school represent knowledge and abilities that the child acquires in proportion to his intelligence since he receives no school instruction on these. It was also assumed that all children in the population tested encounter the kinds of questions and problems presented in the test so that the failure to answer them correctly cannot be attributed to lack of familiarity with these matters.

By the late 1920s, some of these assumptions began to be suspect. Studies at the University of Chicago and the University of Iowa with twins raised in different kinds of homes showed that the measured I.Q.'s were correlated with the quality of the home environment. Truman Kelley, one of the authors of the Stanford Achievement Test, reported that the overlap between intelligence measures and achievement measures was more than 80%, so that one could not use intelligence measures as something different from achievement. Davis and Eells found that the vocabulary of intelligence tests was not the common vocabulary of lower class children and when the test questions in intelligence tests were translated into the "poor man's" vocabulary the scores of the lower class children markedly increased. They also found that lower class children were not accustomed to being asked questions like those in the test and were not greatly interested in trying to answer them. However, when promised a free ticket to

the movies if they did well on the tests, their scores jumped above their previous performance.

Another assumption was made regarding the distribution of scores on standardized tests both of intelligence and of achievement. The early test constructors recognized that to sort children they must find test questions that differentiate among those who take the test. A question that all or almost all children answer correctly does not help much to separate the high scoring from the low scoring ones. The same is true for a question that few can answer correctly. Those that help most to discriminate are questions that half of the children answer correctly and half do not. Binet, in developing the original individual test of intelligence, used items for each age level that about 70 percent of the children answer correctly. This method of selecting items produces a test that sorts persons efficiently, but the test is no longer a representative sample of any defined content or skill. Items that most children have learned are not well represented in the test, nor are items that few have learned. Scores on such norm-referenced tests do not show the extent to which children have learned what the schools have to teach or what the society expects them to learn, although many lay persons interpret test scores this way.

Since such a test indicates only differences among individuals, those who take the test can be arranged in rank order but rankings are not units of measurement that could be said to be equal along the total continuum. On a physical scale of weight, for example, pounds have the same value whether one weighs 50 pounds or 200 pounds,

but the difference in weight between the person at the fiftieth percentile and one at the fifty-first percentile is a fraction of a pound in a normal population, while the difference between the ninety-eighth and ninety-ninth percentile is much more. In an effort to produce a scale that would have equal values along the continuum, the test constructors assumed for both intelligence and achievement tests that the distribution of the population on the bahaviors tested is a bell-shaped one, the so-called normal distribution. In making this assumption, they were strongly influenced by Darwinian notions that the environment in a given locality is constant over a period of time, and that human beings differ randomly in their capacity to adapt themselves to this environment, with only the fittest surviving.

Whatever the characteristics of the physical environment, the social and psychological environment of the modern era is not static. Social institutions, particularly families and schools, do not leave important behaviors to random chance. They seek to aid children and youth to acquire behavior essential to survival. To read, to drive a car, to compute are illustrations of human behavior that at the survival level are not normally distributed. To produce a normal distribution that involves these behaviors, one has to develop a number of test items that are more difficult or unusual than those that appraise typical reading comprehension, automobile driving, arithmetic computation or other common psychological functions. The requirement that intelligence and achievement tests produce scores that give a normal distribution is a constraint that results in many test exercises that do not represent what most

children are being taught nor their psychological functioning in common place situations. It has become clear that this assumption of the normal curve is not an acceptable one for the assessment of school learning or intelligent behavior.

As a result of these critical appraisals, it is now recognized that intelligence tests are tests of knowledge and abilities that are not in themselves innate but must be learned and that in the environment of middle class families children are more likely to learn what intelligence tests assess than are children in other environments. Furthermore, intelligence tests do not furnish a comprehensive appraisal of the knowledge and skills essential to or useful in learning in school and in the larger society. It has also become clear that norm-referenced achievement tests are not comprised of a representative sample of the knowledge and skills the child is being taught or expected to learn in school. Achievement test results do not furnish dependable information about what the child has learned nor do they identify what he has failed to learn of the material being taught. Furthermore, the results of both kinds of tests are reports of the child's previous learning. They can be viewed as predictive only when no serious attempt is made by the child, the teacher or the parents to stimulate, guide and encourage effective efforts to learn.

These findings of the various research investigations had little influence upon the use of these tests until the Civil Rights movement that sought out bias and discriminatory practices in the institutions of American society. The discovery that the directions and terms in intelligence tests and so-called aptitude tests were largely reflections

of the practices and experiences of middle-class Americans, with little or no consideration of the experiences of those from minorities and ethnic backgrounds precipitated an attack upon tests and testing practices. The National Education Association voted not to cooperate with testing activities that did not furnish information useful to teachers. Several other organizations called for a moratorium on testing in schools and colleges. The Supreme Court of the State of California banned the use of intelligence tests in the public schools of the state.

Substitutes for Intelligence Tests

At this time when the use of intelligence tests is seriously questioned, school psychologists, teachers and social workers are asking what they can use in place of these tests. Answers to this question depend on the particular purposes for which psychological and educational data about individuals are to be employed. In the past, the results of intelligence tests have been used for four major purposes: (1) To predict the educational, occupational, and social potential of the individual; (2) To help the child and the parents plan for the child's education and career in terms of "realistic" goals; (3) To assign the child to a particular educational or training program or track, and (4) For a child with a low I.Q., to indicate the appropriate environment in which he or she should be placed.

Longitudinal studies of individual children and youth furnish indications that the first purpose is not possible to attain. Such long term investigations of individual development as the California Studies of Adolescents and the Grant Foundation Studies at Harvard

show that predictions of future attainments are moderately accurate for groups but not for individuals. A surprising number of children from low socio-economic backgrounds and with low I.Q.'s gained positions of importance in the social structure of our society and made significant social contributions. In most of these cases, an adult who cared, challenged the child to achieve and encouraged him or her through the formative years.

As a more recent example, Francis S. Chase and his colleagues in Urban Education investigated schools in the "inner city" which were successful in helping students to learn. They found that in these schools the teachers set high standards for the children, they believed that the children could attain these goals, and encouraged them to try and, if necessary, to try again. The children in turn, knew that the teachers cared about them and their success. On the basis of the results of intelligence tests and earlier achievement tests, one would have expected these students to make little or no progress in school, yet they did. On the other hand, the schools enrolling similar students where the children were not achieving were schools in which the teachers did not expect their students to learn. They accepted the test scores as indicators of the inability of the students to achieve, and put forth little effort to help and encourage them. The students in these schools believed that the teachers didn't really care about them or their success in learning.

Another source of support for the position that all or almost all children can learn what the schools teach is the report of neurologists that the neural mechanisms involved in acquiring oral

speech are more complex than those involved in learning to read yet almost all children acquire oral speech. The comprehension of an oral utterance requires the child to keep in mind a series of words until the end of a clause or sentence. Then the intonation and word order indicate to the listener whether it is a statement, a question, an exclamation or some other form of utterance. At the end of the sentence, the listener constructs the meaning of what he has heard and has at least briefly, remembered. It now appears that most of the difficulties children have in school learning are not due to the inability of the child to learn the kind of things schools are teaching. Most of what they are expected to learn in school are no more demanding of their neural system than learning oral speech.

These findings furnish an additional basis for believing in the faith and aspirations of the founders of this nation who believed that the common man is capable of taking intelligent and responsible part in the ruling of the country. Then, too, for many centuries, philosophers have written of the incalculable potential of every human being, even the most depressed. This potential is often unrecognized until the person is aroused or awakened by the need for heroic achievement.

As workers with children realize that it is impossible and undesirable to make accurate predictions of a child's educational, occupational, and social potential, they may shift their attention to the second purpose for the use of tests: To help the child and the parents plan for the child's education and career in terms of

"realistic" goals. The conception of this planning process should differ markedly in an open democratic society from that in a closed society with a rigid class structure. In the latter case, the educational system is commonly viewed as the means of helping the individual understand and appreciate his or her "proper" place in society and to learn what is necessary to perform in this position. In an open democratic society, the educational system is viewed as the means of helping the individual gain an ever wider understanding of the world and of himself. Furthermore, each increment of education should be opening more and more options in life from which the individual can choose. It should also enable him or her to gain greater understanding of self and the consequences of selecting each option so that the choices made are increasingly wise. In a closed society the educator and others who work with children seek to identify the niche into which the child is to go and to prepare him or her to fit nicely into the niche. Education for the working class child thus is designed to sharpen and narrow his interests and abilities rather than to broaden them.

Several basic principles are involved in educational and career guidance in an open democratic society. First, it is important for each child to have self-selected goals that give direction and meaning to his life. Second, goals can and should change as the child gains increasing understanding of the environment and of self. Third, the child should plan the next steps to take in order to move toward the goals. This helps him to shape realistic goals. Fourth, the child should assess from time to time, the progress he or she is making in taking the steps planned, and, if necessary, modify or completely change the

plan in the light of the assessment and of his or her increasing understanding. Fifth, the social institutions serving children in an open democratic society should be responsive to the needs of individual children and to changing opportunities in the society. This principle is not easy to follow since institutions in all societies become static unless continuous efforts are made to avoid complacency and to counter the self-serving interest of the members of the staff through their discovery of the satisfaction they derive from giving improved services.

To assist the child and parents in this kind of educational and career development, several kinds of data are needed. When obtained, this information can be much more helpful than the results of intelligence tests or norm-referenced achievement tests. Data are needed regarding the child's assets on which educational programs can be built and plans of instruction developed. Knowledge of these assets helps the child and the parents to appreciate the strengths that can be mobilized in facilitating the desired learning. At the same time, they need to know about the child's habits, practices, beliefs and attitudes that are likely to impede his or her full development. It is also helpful to know what knowledge, skills and attitudes the child has developed that are essential or useful in attaining his or her purposes and which of these have not yet been acquired.

The assets of children on which educational programs can be built and which are important in performing learning tasks include interests, previous experiences, significant accomplishments, abilities, constructive habits, and available resources, particularly

those in the home. Several sources can be tapped to obtain data on each of these kinds of personal assets. Clues as to interests can be obtained by using interest inventories or questionnaires, observation of children in the classroom, playground and community, conversations with the child and with parents. More than one source should be used in obtaining data in order to increase the dependability of the evidence. Decisions about an individual ought to be based on more valid and reliable data than is furnished by a single score, comment, observation, or recollection.

A list of previous experiences can be obtained by an inventory or questionnaire like the Holland Student Profile which obtains responses from the student. Parents can also furnish reports and conversations or interviews with the student which may provide additional or corroborative evidence. There is a fine line between the concept of experience and accomplishment. Considering a child's assets for learning, a significant accomplishment is an activity that requires effort and the results of which are viewed as important by the child. Thus, going on motor trips to the zoo is an experience for a five-year-old while learning to ride a bicycle is a significant accomplishment.

Abilities are assets for a child when they are helpful in pursuing his or her educational program. Getting along easily with classmates, knowing the meaning of words used in baseball, being able to read directions for assembling toys are examples of abilities that can be assets for the child. Abilities can be observed on the playground, in school and elsewhere in the community. Some may be indicated by tests. Children often report some of their abilities

in their conversations. Parents can be asked about the child's abilities and a list of useful ones can be given to the child as a check-list on which he can report.

Among the constructive habits that are important assets for learning are promptness in getting to work on tasks, perserverance in efforts, concentration of attention on the work at hand, and a relatively long span of attention. Data on such habits can be obtained by observation in the classroom and playground and from reports of parents. Clues can also be obtained from the child's conversations about his activities. Often, these habits are content-related, that is, a child may be prompt in getting to work on arithmetic or on playground activities while dawdling when attacking an assignment in the language arts. He or she may perservere at length on writing a short story and give up quickly on a difficult exercise in the gymnasium.

Available resources that may be assets for learning include such things as relevant books in the home, a place to study, and parents or other older persons with whom the child communicates regarding work and study. Since the list of helpful resources is not usually large, information about them can be quickly obtained through questioning the child and parents.

When one has collected relevant data about the child's assets, it is helpful to find out about his or her habits, practices, beliefs and attitudes that are likely to impede full development. In many cases, the impediments to development are the lack of helpful assets. Thus, for example, the habits of seeking amusement, avoiding activities requiring effort, short attention span, no books in the home,

no adults with whom to converse about school and work are illustrations of impediments to school learning. Information about these negative characteristics can be obtained by observations in the classroom and on the playground, conversations with the child and parents and the clues furnished by interest inventories, previous experiences and achievements.

This brief description of the collection of helpful data about the child's assets and impediments may give the impression that the information so obtained is not dependable, is highly subjective in interpretation, and is imprecise. It may also give the impression that the quantity of data to be collected and the variety of sources and techniques used make such a comprehensive appraisal of the child highly impractical, requiring more time than most of those who work with children can spare.

With regard to dependability, it has been found that when each item of data is checked by the information obtained from two or more sources, the dependability of the evidence is greatly increased. Furthermore, the possible errors in interpreting the relevance and significance of each item are reduced in the task of synthesizing the variety of items into a tentative picture of the child's dynamics, an interpretation which must be coherent and "make sense" to persons who work with children. Errors still remaining are likely to be identified subsequently as the child's progress is reviewed. When he or she takes the steps planned for achieving his or her educational goals, the success noted and the difficulties observed furnish new information, enabling one to improve the picture, and revise previous data that now appear in error.

With regard to precision of data, the requirements for preciseness are different for continuous planning purposes than for one-time sorting. When a sorting decision is made on the basis of a single score, it must be precise enough at the cutting points. Hence, precision is necessary to reduce errors of placement. For continuous planning purposes, on the other hand, no irreversible decision is required. Whatever may be indicated by the data as the child's assets and impediments in learning, he or she is encouraged to set standards that represent a challenging learning task, one that is attainable but will require effort and discipline. If the subsequent progress and difficulties of the student indicate imprecision in the evidence used, the continuing cumulative collection of relevant data will furnish an increasingly accurate and adequate picture of the child's functioning.

The concern that the procedure described requires more time in collecting and recording data and in studying the implications than most of those who work with children can give points to a real problem which is inherent in implementing a philosophy that emphasizes the goal of educating and developing all children to the fullest extent possible. Such a philosophy requires that institutions adapt their practices to serve fully the needs and the capabilities of their students and clients. When institutions are static and not expected to change, children, too, are viewed as largely unchanging. Sorting static students to fit static institutions does not require the identification of assets which can support children in their development. Hence, tests of intelligence and of achievement that furnish a single score are useful for sorting but have little

or no value in obtaining a fairly comprehensive picture of the individual; their results are only one dimensional while the dynamic child is a full-bodied person and requires many dimensions to assess possibilities for development. Obtaining sufficient information about the child to help him or her to progress is much more time-consuming than giving and scoring a single test. However, all of the helpful information does not need to be collected at once. Over a period of months and years the child's picture can become increasingly complete if some items of data are collected at each of the intervals when time can be spared and the information recorded.

The third purpose for which standardized intelligence and achievement tests have been used in the past is to help in the assignment of the child to a particular educational or training program or track. The procedure commonly followed in this case has been based upon two conceptions that are inappropriate to an open democratic society. The first is that educational or training programs or tracks are relatively fixed rather than being adaptive to the needs and abilities of the students. The second is that the children's characteristics, especially their previous experience and progress in school, are static and determine what they can and should learn and the level of education and occupation that they can attain.

The consequence of this deterministic view has commonly been to establish programs and tracks which prevent children whose primary school record has shown little progress from enrolling in academic programs in the high school. This has the effect of deciding at age 11 that these children will be put in a vocational

program and not attend college. The purpose of general or liberal education in American society is to help every student learn the knowledge, skills and attitudes that can enable him to take an intelligent and responsible role in the society. The chief designers of the new republic at the time of the Declaration of Independence had recognized the weakness of England and other European nations in which a few people were educated to be the rulers while most of the people were trained as workers. In the new nation, every man was to be a ruler as well as a worker. Hence, the school was viewed as a major means for the citizen to become intelligent and competent. Today, the society has become so complex and the world so interdependent that the citizen's general or liberal education cannot be adequate if it is gained only through study in the elementary school. Although what every citizen needs to learn, all normal children can learn, some will take longer than others, and a variety of learning activities may be necessary to help the varied children of our nation learn. Hence, the school must adapt its programs to help all students learn what is essential rather than to design programs and tasks in which some students are denied the opportunity to learn what is necessary to be an intelligent and responsible "ruler" as well as worker.

With this in mind, the teacher should seek to obtain data for each child regarding the relevant knowledge and skills he has already acquired. This information will suggest where he or she can begin learning in each subject or area of instruction. An adaptive school organizes the curriculum in each area in terms

of continuous progress so that the student can move ahead from the point where he begins without the discontinuity of rigid time schedules. Such a curriculum can provide for continuous learning for each child although at varying rates. To find out what knowledge and skills the child has already acquired, tests of the relevant content may be administered or the data may have been entered in the child's previous record. Standardized norm-referenced tests do not provide dependable information as to the particular knowledge and skills the child has learned. Tests are required that are constructed to sample the knowledge and skills relevant to the school's program. Such tests are sometimes called objective-referenced, or content-referenced. They are a class of tests included under the general term criterion-referenced tests.

Tracks are not always designed to provide for learning different content and objectives. They are sometimes conceived as ways of grouping children for instruction while the major educational objectives are the same for all tracks. In the early use of standardized tests, it was assumed that they measured the ability of each student and that instruction would be more effective if the children in each group were approximately of the same ability. However, research on this so-called "ability grouping" did not indicate generally that students grouped in this way made greater progress in learning than children who were grouped by alphabetic order of their last names or some other basis not related to their scores on standardized tests. The studies showed that although the "lower ability" or "slower" classes covered the same content as "higher ability" or "faster" classes, the former groups had low morale, were listless and apathetic. Neither the children nor

the teachers in the lower groups expected much. The learning of these children was usually markedly less than similar children in unsorted groups.

At the present time, the available evidence suggests that the learning of children in groups is facilitated when the members of the group are working on the same content or skills, when the members are confident that they can learn what is expected, and when each member of the group is informed about his success on the learning activity, and if unsuccessful, is encouraged to try again, either the same learning task or one the teacher believes may be more appropriate. The data needed for grouping of this sort is information about the relevant knowledge and skills the child has already mastered which can be furnished by relevant objective-referenced tests or it may have been entered in the previous record.

In general, it can be said that in assigning a child to a program, track or instructional group, data about his or her assets, that is, interests, experiences, resources and the like are useful as well as information about what has already been learned. Programs can be designed and groups can be taught so as to build upon the particular assets of the children if these assets are identified.

When a democratic educational system in an open society seeks to enable all children to learn what is essential for intelligent participation in that society it may also provide opportunities for each individual to achieve his or her own purposes, insofar as they are consistent with the societal purposes, and to become a unique person. There is a strong sense among the American people of the importance of individual self-realization and many expect the school

to help every student to learn what is required for him or her to be fulfilled. Optional courses, optional projects within courses, and individual study programs are the most common ways by which American schools try to meet this expectation. Information about the child's assets and impediments to learning and about his or her hopes and aspirations should be useful in helping a student select options that are likely to be significant to him or her.

The fourth purpose for which standardized tests, particularly tests of intelligence, have been employed is to identify children with low I.Q.s and to decide on the basis of test results the appropriate environment in which these children should be placed. Most children are actively coping with the environment of school, home, and community. However, there are a few who appear overwhelmed by the minimal requirements of living. They may show their sense of inadequacy by withdrawal or by aggressive attacks upon objects and persons around them. Most, however, are passive. Some may have suffered from brain damage at birth but most of them do not appear to have physical impairments. They are frequently classified as mentally retarded. All or almost all of these children can learn if stimulated and if the learning activities do not appear to them to be beyond their ability to respond.

The results of intelligence tests indicate the extent to which these children respond like typical middle class children to the kinds of questions and problems which are commonly encountered by typical middle class children. In most cases, these exceptional children have not been encountering or responding to questions and problems of this sort so that the test results furnish little or

no indication of what knowledge and skills they have acquired nor what attitudes and interests they have developed that focus or inhibit their actions.

When a child is found who is not coping with minimal effectiveness in his or her present environment, it is necessary to search more deeply through observation of and conversation with the child, through interviews with parents and others who are associated with the child and through tests specifically designed to identify knowledge, skills and interests likely to have been acquired in the existing environment. The investigation should also seek to identify impairments to effective functioning and impediments to learning. In this way a picture of assets and negative conditions can be developed that are specific to the individual highly exceptional child, a picture that highlights dynamic factors that can drive and support learning.

Correspondingly, instead of treating possible environments as static, efforts should be made to find environments that can develop programs that will stimulate, guide and encourage the child's learning, little as it may be at first. The current public pressure for mainstreaming handicapped children is a response to the recognition that these children have often been treated as though they were incapable of developing and would continue to function at the present low level. They were frequently placed in an environment which offered no challenge; they vegetated in isolation from meaningful social interaction. The correction for this inhuman treatment is to identify assets and build constructive programs of learning with the same concern for their development as expressed for more typical children. To make this change

in current practices requires diligent searching for assets and the exercise of great ingenuity in devising programs; but both are possible.

In Summary

We are now in a period of transition in educational thinking and practices. For centuries, education was rationed both because the demand was limited and the resources were scarce. Most children received little schooling. Now the demand for educated persons is great and society expects all children to learn. Furthermore, we have found ways to stimulate and guide constructive learning for an increasing proportion of the population.

The changes are propelled by the rising aspirations of the common people throughout the world and, particularly, in the United States where the Civil Rights movement has focused attention on the discrepancy between our democratic philosophy and the practices of our social institutions. Reforms have been impeded by the prevailing methods of assessing the potential and the learning of children. Tests devised to sort children are based on assumptions of relative rigidity in the level of children's functioning and the static character of social institutions. These tests no longer serve adequately in providing information that can help in planning for continuous development of human beings through institutions adapting to the needs of their clients. Useful data can be obtained, however, and the time and effort involved in collecting comprehensive information may be reduced as experience and experiments reveal more economical means of assessment.